## **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-014239

Address: 333 Burma Road **Date Inspected:** 17-Apr-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Mr.Tian Lei **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

#### **Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

This QA Inspector Randomly observed the following work in progress:

BAY-1- Traveler Rail (TR)

Flux Cored Arc Welding (FCAW) welding of weld joint 20TR2-033-011. Welder is identified as 216872. ZPMC Quality Control (QC) is identified as Mr. Xiang feng feng. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2232-TC-U5-F.

BAY-2-Floor Beam (FB)

Submerged Arc Welding (SAW) welding of weld joint FB3187-001-002. Welder is identified as 045270. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-U3c-S-2.

SAW welding of weld joint FB3188-001-001. Welder is identified as 045265. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS:

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WPS-B-T-2221-B-U3c-S-2.

## **BAY-6-WEST JACKING FRAME (WJF)**

Shielded Metal Arc Welding (SMAW) welding of weld joint WJF-0-270. Welder is identified as 049769. ZPMC Quality Control (QC) is identified as Mr. Zhao Jian Hang. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-3312-TC-P4.

BAY-8-TR

This QA Inspector observed ZPMC welding personnel performing Buttering by FCAW process for 11TR10-001. Welder is identified as 054460. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e. WPS-345-FCAW-1G (1F)-Repair-1. The Buttering welding was been performed against the B-CWR1340 Rev No: 0 and ZPMC Quality Control (QC) is identified as Mr.Zhao chong jian and Certified Welding Inspector (CWI) is identified as Mr. Sun Bo.

This QA Inspector observed ZPMC welding personnel performing Buttering by FCAW process for 11TR10-002. Welder is identified as 054459. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e. WPS-345-FCAW-1G (1F)-Repair-1. The Buttering welding was been performed against the B-CWR1340 Rev No: 0 and ZPMC Quality Control (QC) is identified as Mr.Zhao chong jian and Certified Welding Inspector (CWI) is identified as Mr. Sun Bo.

OBG TRIAL ASSEMBLY.

Segment:7AW-7BW – Panel Point#49~49.5.

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 005537.

Magnetic Particle Testing (MT)

This QA Inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The members are identified as OBG Lift 7 West Hold back weld Components. Total number of welds MT Tested: 28No's. The weld designations are review as follows:

- 1. DP646-001-015,016
- 2. DP647-001-009,010
- 3. EP065-001-009,010
- 4. EP066-001-009,010
- 5. SP437-001-029,030
- 6. SP438-001-029,030
- 7. SP519-001-019~022
- 8. SP518-001-033~036

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9. SP478-001-035~038, 10. SP479-001-042~045

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

# **Summary of Conversations:**

Only general conversation was held between QA and Quality Control (QC) concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Prabhu,Surendra	Quality Assurance Inspector
Reviewed By:	Hall,Steven	QA Reviewer